WHAT IS CLAIMED IS:

1. A sound signal recognition system, comprising:

a sound signal input part for receiving a sound signal including either one selected from a voice signal section and a DTMF signal section or both sections;

a matching part including a voice signal model and a DTMF signal model, for conducting a matching process of the sound signal inputted from the sound signal input part by using both the voice signal model and the DTMF signal model for reference; and

a sound signal recognizing part including a language model, for recognizing the sound signal by using the matching result of the matching part and the language model,

wherein a sound signal recognition process is conducted with respect to the sound signal including either one selected from the voice signal section and the DTMF signal section or both sections.

2. A sound signal recognition system according to claim 1, wherein the sound signal recognizing part selects a better result by comparing the matching result using the voice signal model with the matching result using the DTMF signal model in the matching part for each segment of a sound signal section serving as a recognition unit, the sound signal recognition system further comprising an integrating part for connecting sound signal recognition results selected by the sound signal recognizing part and integrating them as a total sound signal recognition result with respect to all the sections of the input sound signal.

3. A sound signal recognition system according to claim 2, wherein the language model is capable of including a DTMF signal as sound signal recognition vocabulary.

4. A sound signal recognition system according to claim 2, further comprising

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a guidance part for providing a user who performs sound signal input via the sound signal input part with guidance on whether a specific vocabulary is to be input as sound signal input by a voice or sound signal input by a DTMF signal.

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5. A dialog control system including a sound signal recognition system of claim 2, which controls a dialog flow with a user, based on a sound signal recognition result according to the sound signal recognition system.

10 6. A sound signal recognition system according to claim 1, wherein the language model is capable of including a DTMF signal as sound signal recognition vocabulary.

7. A sound signal recognition system according to claim 6, further comprising
15 a guidance part for providing a user who performs sound signal input via the sound signal input part with guidance on whether a specific vocabulary is to be input as sound signal input by a voice or sound signal input by a DTMF signal.

20 8. A dialog control system including a sound signal recognition system of claim 6, which controls a dialog flow with a user, based on a sound signal recognition result according to the sound signal recognition system.

9. A sound signal recognition system according to claim 1, further comprising
25 a guidance part for providing a user who performs sound signal input via the sound signal input part with guidance on whether a specific vocabulary is to be input as sound signal input by a voice or sound signal input by a DTMF signal.

30 10. A sound signal recognition system according to claim 9, wherein upon detecting that a misidentification rate of a sound signal inputted by a voice for a specific vocabulary is high under predetermined conditions, the

integrating part notifies the guidance part of instruction information for outputting guidance for asking the user to conduct re-input of the sound signal by a DTMF signal for the specific vocabulary.

5   11. A dialog control system including a sound signal recognition system of claim 10, which controls a dialog flow with a user, based on a sound signal recognition result according to the sound signal recognition system.

12. A sound signal recognition system according to claim 9, wherein when
10   the integrating part estimates and holds a misidentification rate in the matching result for the sound signal by a voice and a misidentification rate in the matching result for the sound signal by a DTMF signal, and either one of the misidentification rates becomes higher than a predetermined value, the integrating part notifies the guidance part of instruction information for
15   displaying guidance to the user to conduct input by the other sound signal.

13. A dialog control system including a sound signal recognition system of claim 12, which controls a dialog flow with a user, based on a sound signal recognition result according to the sound signal recognition system.

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14. A sound signal recognition system according to claim 9, wherein the guidance part has a function of notifying a user of correspondence between a DTMF signal and a vocabulary in advance.

25   15. A dialog control system including a sound signal recognition system of claim 14, which controls a dialog flow with a user, based on a sound signal recognition result according to the sound signal recognition system.

16. A dialog control system including a sound signal recognition system of
30   claims 9, which controls a dialog flow with a user, based on a sound signal recognition result according to the sound signal recognition system.

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17. A dialog control system including a sound signal recognition system of claim 1, which controls a dialog flow with a user, based on a sound signal recognition result according to the sound signal recognition system.

5   18. A sound signal recognition method, comprising:

inputting a sound signal including either one selected from a voice signal section and a DTMF signal section or both sections;

matching the input sound signal by using both a voice signal model and a DTMF signal model;

10   recognizing the sound signal by using the matching result and a language model; and

conducting a sound signal recognition process with respect to the sound signal including either one selected from the voice signal section and the DTMF signal section or both sections.

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19. A dialog control method including the sound signal recognition method of claim 18, which controls a dialog flow with a user, based on a sound signal recognition result using the sound signal recognition method.

20   20. A sound signal recognition program for executing a sound signal recognition process with respect to an input sound signal including either one selected from a voice signal section and a DTMF signal section or both sections, the program comprising:

a sound signal input processing operation of inputting a sound signal
25   including either one selected from a voice signal section and a DTMF signal section or both sections;

a matching processing operation of conducting a matching process of the sound signal inputted in the sound signal input processing operation by using both a voice signal model and a DTMF signal model; and

30   a sound signal recognition processing operation of performing recognition of the sound signal by using a language model based on a matching result in the matching processing operation, the language model

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including a word dictionary and grammar.